REMARKS

Reconsideration and withdrawal of the rejections set forth in the above-mentioned Official Action in view of the foregoing amendments and the following remarks are respectfully requested.

Claims 1, 3, 5-11, 14, 15, 17, 19-25, 28, 30 and 32-38 are pending in the application, with Claims 1, 15, 30, 32-38 being independent. Claims 2, 4, 16 and 18 have been cancelled without prejudice. Claims 1, 5, 15, 19, 30 and 32-34 have been amended. Claims 35-38 are newly added. Applicant submits that no new matter has been added.

Claims 1, 15 and 30-34 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,449,055 B1 (Okimoto et al.) in view of EP 0 750 251 A1 (Fujita et al.) and further in view of U.S. Patent No. 6,462,830 (Negishi). Claims 2, 3, 5, 7, 9, 16, 17, 19, 21 and 23 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Okimoto et al. in view of Fujita et al., and further in view of Negishi. Claims 4 and 18 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Okimoto et al. in view of Fujita et al., and further in view of Negishi and U.S. Patent No. 6,247,786 B1 (Booth et al.). Claims 6 and 20 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Okimoto et al. in view of Fujita et al., and further in view of Negishi and U.S. Patent No. 6,120,197 (Kawamoto et al.). Claims 8 and 22 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Okimoto et al. in view of Fujita et al., and further in view of Negishi and U.S. Patent No. 6,053,645 (Myung). Claims 10, 11, 24 and 25 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Okimoto et al. in view of Fujita et al., and further in view of Negishi. Claims 14 and 28 were rejected under 35 U.S.C. § 103(a)

as allegedly being unpatentable over Okimoto et al. in view of Fujita et al., and further in view of Negishi and U.S. Patent No. 5,845,057 (Takeda et al.). These rejections are respectfully traversed.

Applicant's invention as recited in independent Claim 1, as amended, is directed to a print system in which a printing apparatus prints by using print data which is sent by a printer driver which is made operative by an information processing apparatus. The printer driver includes a structure information generation unit adapted to divide each page of print data to be sent into a plurality of data blocks and to generate structure information of each data block, the structure information including a color attribute of the data block, an information adding unit adapted to add the structure information generated by the structure information generation unit to each data block of the print data which is sent, and an information sending unit adapted to send the print data including the added structure information to the printing apparatus. The printing apparatus includes a determination unit adapted to determine a number of nozzles of a print head to be used for each data block of the print data on the basis of the received structure information, and a print process unit adapted to execute a printing process of the data block of the print data by using the number of nozzles determined by the determination unit. If data of a next page exists, during the print of a present page, the printer driver notifies the printing apparatus of a print mode and a data structure of the next page as the structure information by the information sending unit. If it is possible to confirm that a printing operation which is being performed at present can be continuously executed from the notified contents, the printing apparatus subsequently executes a process of the next page.

Applicant's invention as recited in independent Claim 30, as amended, is directed to a printing apparatus for printing by using print data which is sent by a printer driver which is made operative by an information processing apparatus. The printing apparatus includes an information receiving unit adapted to receive structure information added to each data block of the print data which is sent by the printer driver, the structure information including a color attribute of the data block divided from the print data, a determination unit adapted to determine a number of nozzles of a print head to be used for each data block of the print data on the basis of the received structure information, and a print processing unit adapted to perform a printing process of the data block of the print data by using the number of nozzles determined by the determination unit. If it is possible to confirm that a printing operation which is being performed at present can be continuously executed from the structure information of a next page, the print processing unit subsequently executes a process of the next page.

Applicant submits that the cited references, whether taken alone or in combination, fail to teach or suggest many features of Applicant's claimed invention.

Okimoto et al. is directed to a print system that is capable of exchanging data in the form of electronic mail between a plurality of computer systems. Okimoto et al. discloses receiving a piece of mail, extracting an attached file from the received mail, and printing the extracted file. Included in the system is a print driver that can supply the print data to a printer, allowing the printer to print the data. Nowhere, however, is Okimoto et al. understood to teach or suggest at least a printer driver that generates structure information of each data block, the structure information including a color attribute of the data block, as recited in Claim 1. Okimoto et al. is also not understood to teach or suggest

that the printing apparatus determines a number of nozzles of a print head to be used for each data block of the print data on the basis of the received structure information, as recited in Claims 1 and 30.

Fujita et al. discloses that generally a host computer transmits information about a print format of a relevant page prior to transmitting the print data of each page to the printer. The information includes information indicative of a print range in the paper, information indicative of a resolution of printing, and information to select a print mode showing a level of print quality. This type of information relates to the entire print job, rather than individual data blocks. Accordingly, Fujita et al. is not understood to teach or suggest at least a printer driver that generates structure information of each data block, the structure information including a color attribute of the data block, as recited in Claim 1. Fujita et al. is also not understood to teach or suggest that the printing apparatus determines a number of nozzles of a print head to be used for each data block of the print data on the basis of the received structure information, as recited in Claims 1 and 30.

Negishi discloses comparing the number of items of prepared raster image data with the number of sheets of recording paper supplied to an image forming unit, and continuing or halting a continuous printing operation according to the comparison result. Negishi, however, is not understood to teach or suggest at least a printer driver that generates structure information of each data block, the structure information including a color attribute of the data block, as recited in Claim 1. Negishi is also not understood to teach or suggest that the printing apparatus determines a number of nozzles of a print head to be used for each data block of the print data on the basis of the received structure information, as recited in Claims 1 and 30.

Booth discloses printing an image with a print head having a plurality of nozzles. A host computer 6 outputs image data to the printing apparatus. Once received, the printing apparatus decompresses the image data and reorders the image data into consecutive vertical slices. Booth discloses that the printing apparatus analyzes the print data and then determines the number of nozzles to be used. Nowhere, however, is Booth understood to teach or suggest at least a printer driver that generates structure information of each data block, the structure information including a color attribute of the data block, as recited in Claim 1. Booth is also not understood to teach or suggest that the printing apparatus determines a number of nozzles of a print head to be used for each data block of the print data on the basis of the received structure information, as recited in Claims 1 and 30.

Kawamoto et al. was cited for disclosing the discrimination based on a color attribute. Myung was cited for disclosing adding and subtracting margin data based on the direction based on the direction the ink cartridge is moving. Takeda et al. was cited for disclosing error prediction. None of these references are understood remedy the above-noted deficiencies of Okimoto et al., Fujita et al., and Negishi.

In view of the foregoing, Applicant submits that the cited references, whether taken alone or in combination, fail to teach or suggest many features of Applicant's claimed invention as recited in independent Claims 1 and 30. Applicant submits that independent Claims 15 and 32-38 recite features similar to those recited in Claims 1 and 30, and that for reasons similar to those recited above with respect to Claims 1 and 30, the cited references fail to teach or suggest many of the features recited in Claims

15 and 32-38. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the § 103 rejections.

Applicant submits that the present invention is patentably defined by independent Claims 1, 15, 30 and 32-38. Dependent Claims 3, 5-11, 14, 17, 19-25, and 28 are also patentable, in their own right, for defining features of the present invention in addition to those recited in the independent claims. Individual consideration of the dependent claims is requested.

Applicant submits that the instant application is in condition for allowance. Favorable reconsideration and an early Notice of Allowance are requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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